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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,447	09/30/2003	Nikolay Korovin	40696.0300	2446
20322	7590	11/27/2006	EXAMINER	
SNELL & WILMER 400 EAST VAN BUREN ONE ARIZONA CENTER PHOENIX, AZ 85004-2202			ELEY, TIMOTHY V	
			ART UNIT	PAPER NUMBER
			3724	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,447

Applicant(s)

KOROVIN ET AL.

Examiner

Timothy V. Eley

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 15-23 is withdrawn in view of the newly discovered reference to Maloney et al(7,029,382).

Rejections based on the newly cited reference follow.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 15,17,19-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al(5,720,845) in view of Maloney et al(7,029,382).

- Liu et al discloses a workpiece carrier including an integrated pressure control system, the workpiece carrier comprising; a carrier housing(including part 62), a workpiece bladder(38) coupled to the housing, the workpiece bladder having a surface configured to press against a surface of a workpiece; and at least one pressure transducer(29) mounted to the carrier housing for controlling pressure provided to the workpiece bladder. See figure 3, column 3, lines 39-end.
- Liu et al does not disclose a rotary union for connecting electrical lines, an air supply line, and an air exhaust line to the pressure control system.
- Maloney et al discloses that it is well known in the art to provide a rotary union mounted to a workpiece carrier for communicating stationary supply sources/lines external to the

Art Unit: 3724

carrier with the carrier and locations on the carrier by allowing the sources/lines to pass therethrough. See column 11, lines 10-36.

- Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Liu et al apparatus by providing a rotary union mounted to the workpiece carrier for connecting electrical lines, an air supply line, and an air exhaust line to the pressure control system by allowing the lines to pass therethrough as taught by Maloney et al.
 - Regarding claim 17, as stated above, the pressure control system comprises at least one pressure transducer(29).
 - Regarding claim 19, the rotary union, as modified, include an air supply line and an air exhaust line.
 - Regarding claims 20 and 23, the workpiece carrier further comprises a control board(30) which is mounted to the carrier. See column 4, lines 8- 13.
 - Regarding claim 21, the bladder comprises a plurality of pressurizable zones and each zone has a pressure transducer for monitoring the pressure to that zone as clearly depicted in figure 3.
4. Claims 15,17, and 19-21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Berman et al(2003/0211811) in view of Maloney et al(7,029,382).

Art Unit: 3724

- Berman et al discloses a workpiece carrier comprising; inherently a carrier housing, a workpiece bladder(14) coupled to the housing, the workpiece bladder having a surface configured to press against a surface of a workpiece; and at least one pressure transducer(20) mounted to the carrier housing for controlling pressure provided to the workpiece bladder. See figure 1, paragraphs 20,25,26, and 28.
- Liu et al does not disclose a rotary union for connecting electrical lines, an air supply line, and an air exhaust line to the pressure control system.
- Maloney et al discloses that it is well known in the art to provide a rotary union mounted to a workpiece carrier for communicating stationary supply sources/lines external to the carrier with the carrier and locations on the carrier by allowing the sources/lines to pass therethrough. See column 11, lines 10-36.
- Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Berman et al apparatus by providing a rotary union mounted to the workpiece carrier for connecting electrical lines, an air supply line, and an air exhaust line to the pressure control system by allowing the lines to pass therethrough as taught by Maloney et al.

Art Unit: 3724

- Regarding claim 17, as stated above, the pressure control system comprises at least one pressure transducer(20).
- Regarding claim 19, the rotary union, as modified, include an air supply line and an air exhaust line.
- Regarding claim 20 and 23, the rotary union may be used for connecting the at least one pressure transducer with a control board(as broadly recited by applicant).
- Regarding claim 21, the bladder comprises a plurality of pressurizable zones and each zone has a pressure transducer for monitoring the pressure to that zone as clearly depicted in figure 1.

5. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al or Berman et al, each considered independently, in view of Zias et al(4,051,712).

- Both Liu et al and Berman et al are explained above.
- Neither Liu et al nor Berman et al discloses an automatic calibration system for calibrating the at least one pressure transducer.
- However, Zias et al discloses that it is well known in the art to automatically calibrate a pressure transducer in order to maintain a desired pressure level. See abstract.
- Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified both the Liu et al and Berman et al apparatuses, each

Art Unit: 3724

considered independently, by providing an automatic calibration system for automatically calibrating the at least one pressure transducer as taught by Zias et al in order to maintain desired pressure levels in the apparatuses.

6. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al in view of Muller et al (5,980,361).

- Liu et al is explained above.
- Liu et al does not disclose at least one valve for the control system.
- Muller et al discloses control valves for independently operating pressure chambers in a workpiece carrier for individually actuating different areas of a support plate 1.
- Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Liu et al apparatus by providing control valves for independently operating each of the actuators as taught by Muller et al for better control of the apparatus.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- The cited prior art discloses workpiece carriers having rotary unions.

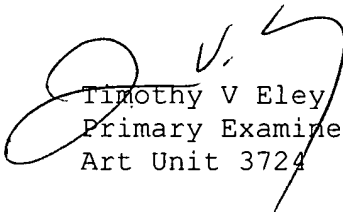
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy V. Eley

Art Unit: 3724

whose telephone number is 571-272-4506. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Timothy V Eley
Primary Examiner
Art Unit 3724

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